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(54)NEW SYNTHETIC SUBSTRATE FOR
MEASUREMENT OF ACTIVITY HAVING
CHROMOPHORE OF FLUOROPHORE TO
MATRIX METALLOPROTEASE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a new synthetic substrate necessary for screening of a matrix metalloprotease (MMP) inhibitor and suitable for rapid, simple and highly sensitive MMP assay system, etc., capable of carrying out multi-treatment by including a specific chemical structure.

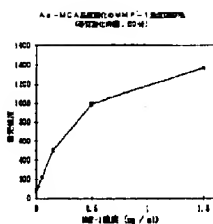
SOLUTION: This compound is represented by formula I [Z is a protective group of N terminal; Y is a chromophore or a fluorophore; B is a peptide residue containing one or more amino acid residues hardly ingested with aminopeptidase; C is a peptide residue comprising an amino acid residue other than the amino acid residues hardly ingested with aminopeptidase], e.g.

Suc-Lys-Pro-Leu-Gly-Leu- Phe-Ala-Arg-MCA (MCA is 4-methyl-coumarin-7-yl-amide). Furthermore, activity of MMP and MMP containing double digesting process by aminopeptidase are preferably measured by using the synthetic substrate. The synthetic substrate is obtained by reacting, e.g. a compound of formula II with a compound of formula III in the presence of a condensing agent and then deprotecting the resultant reaction product.

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(N-20) Z-B-Gly-Leu-C-Y (C-10)

Ac-Lys (Glu)-Pro-Lys-Gly

Leu-Phe-His-Arg (Glu)-Glu